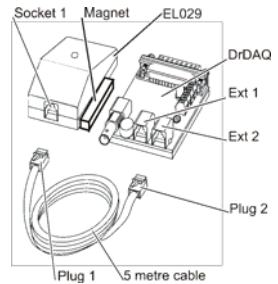# EL029

(PP066)
DrDAQ Reed Switch

1 Introduction

This leaflet describes the EL029 Reed Switch and how to use it with DrDAQ (USB and parallel port versions). The EL029 pack contains:

- 1 EL029 Reed Switch
- 1 EL032 3 metre sensor extension cable
- 1 MI055 magnet
- 1 instruction leaflet

2 Before you begin

Please read through this leaflet before you use your EL029. You will need to have the relevant Pico software set up on your computer.

Please read the DrDAQ manual for information on PicoScope and PicoLog.
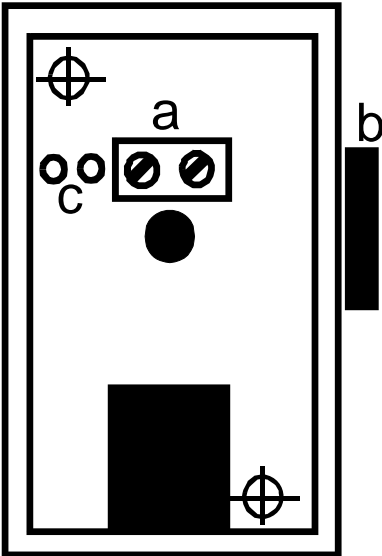

3 What the EL029 Reed Switch does

The EL029 Reed Switch is operated by a magnet.
When the magnet is placed next to the EL029, in the position shown, the Reed Switch closes. It may be used to indicate position or, as an alternative to a light gate, to give data about motion.

4 Installation

The door switch module contains a built-in reed switch which can be activated using a magnet attached to the door. Alternatively, if it is not practical to mount the door switch for operation with a magnet, an external micro-switch can be wired to the screw terminals inside the door switch module. The door switch module can be attached to a wall either using adhesive foam, or by removing the cover and using two screws to attach the unit to the wall. The following template can be used to drill the fixing holes. To attach an external microswitch:

- make a hole in the case
- pass the cable through the hole
- wrap the cable round the central pillar
- attach the wires to connectors marked a for additional security, use a cable tie to attach the cable to the two holes marked c on the left of the connector block.

The black bar labelled b is the ideal location to place a magnet to activate the internal reed switch.
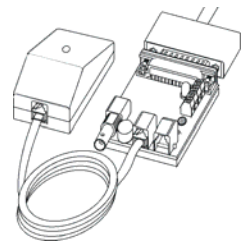
5 How to connect the EL029 to DrDAQ

Take care not to force the plugs into the sockets.

1. Push Plug 1 into Socket 1 until you hear a click.
2. Push Plug 2 into Ext 1. If Ext 1 is already in use, push Plug 2 into Ext 2 (or Ext 3 for USB DrDAQ).

Remember to connect DrDAQ to your computer. When you have connected your EL029 it should look like this (parallel port DrDAQ shown).
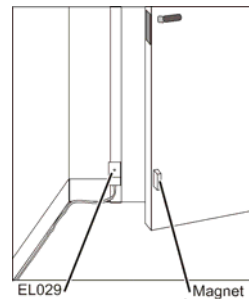

6 How to use the EL029

1. Start PicoScope*
2. Set channel A to Ext 1 (or Ext 2 or Ext 3** depending on availability)
3. Set trigger to none
4. Set the time to 10 s/div
5. Move the magnet next to the EL029 and notice that the trace rises to 100%
6. Move the magnet away from the EL029 and notice that the trace falls to 0%

*Use PicoScope 5 with the parallel port DrDAQ or PicoScope 6 with USB DrDAQ.

** USB DrDAQ only.

You can also use the EL029 with PicoLog to collect data over longer times. Try this arrangement with the EL029 used to monitor whether a door is open or closed. Fix the magnet to the door. Line the EL029 up so that the magnet operates the Reed Switch when the door is closed.

Issues:

1) 01.01.01 First issue
2) 01.11.04 Update.
3) 01.04.08 Updated format.
4) 10.01.13 Updated format. Included USB DrDAQ information.

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